From an iOS mobile app via WebRTC

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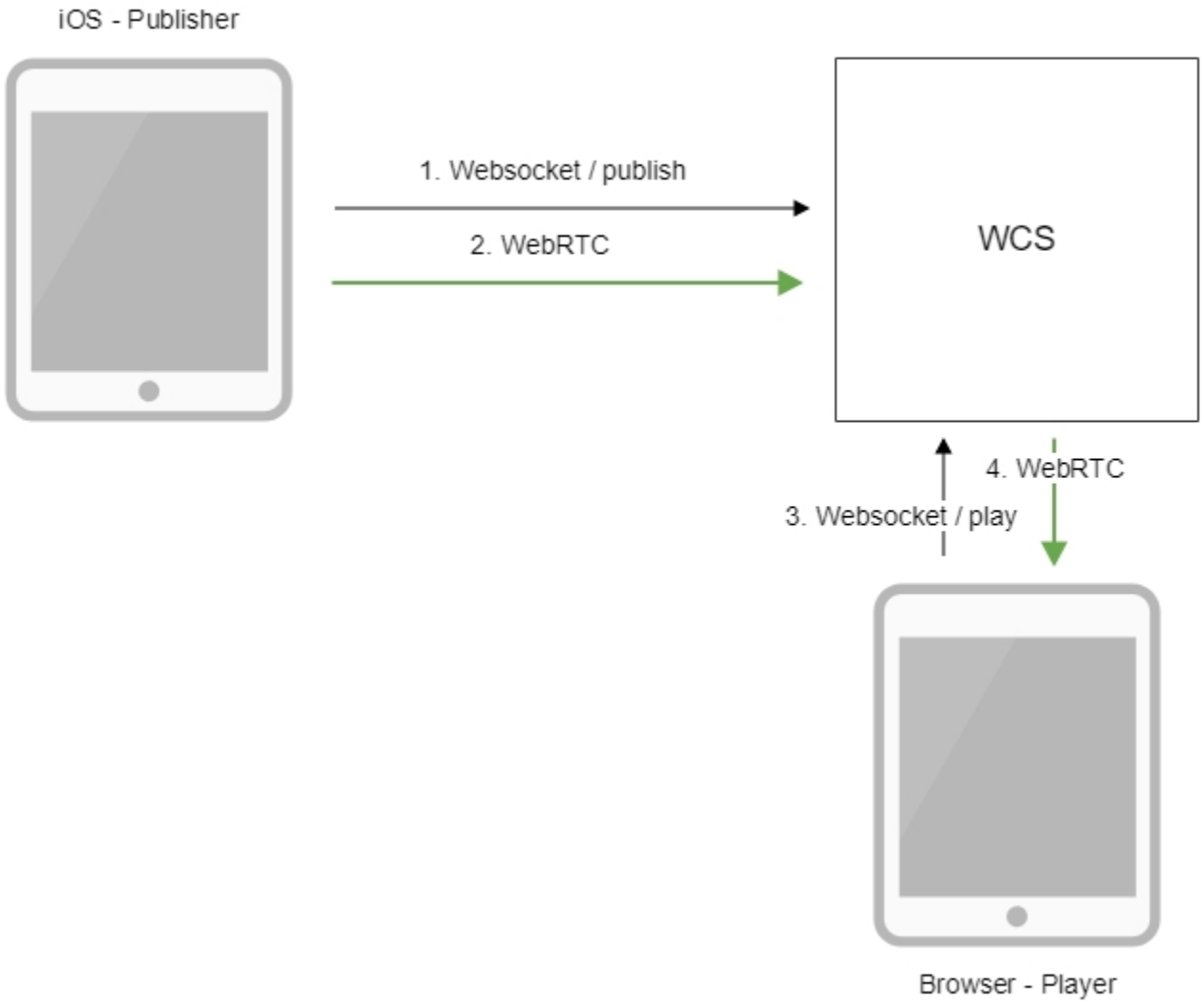
Overview

WCS provides SDK to develop client applications for the iOS platform

Operation flowchart



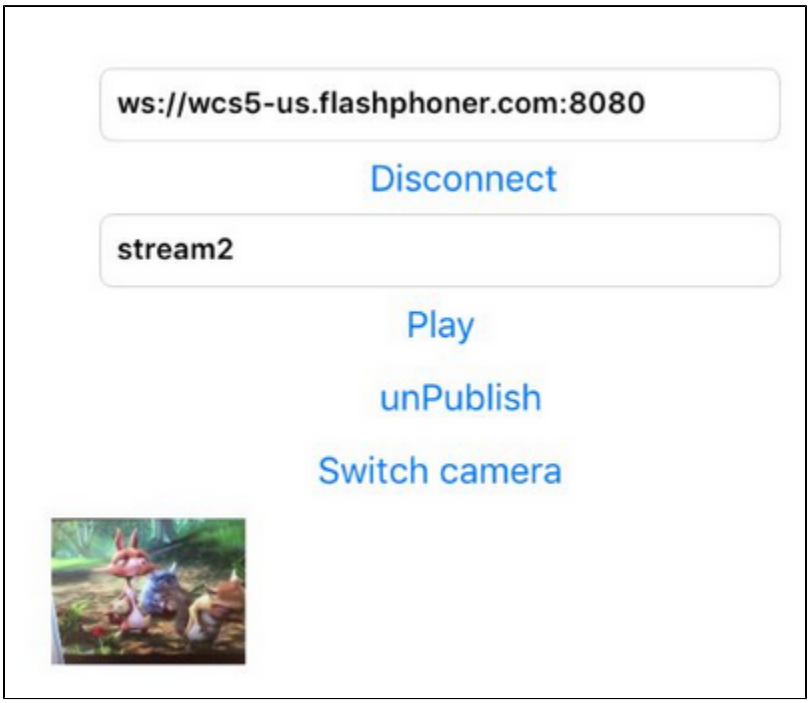
1. The iOS device connects to the server via the Websocket protocol and sends the publish command.
2. The iOS device captures the microphone and the camera and send the WebRTC stream to the server.
3. The browser establishes a connection via WebSocket and sends the play command.
4. The browser receives the WebRTC stream and plays that stream on the page

Quick manual on testing

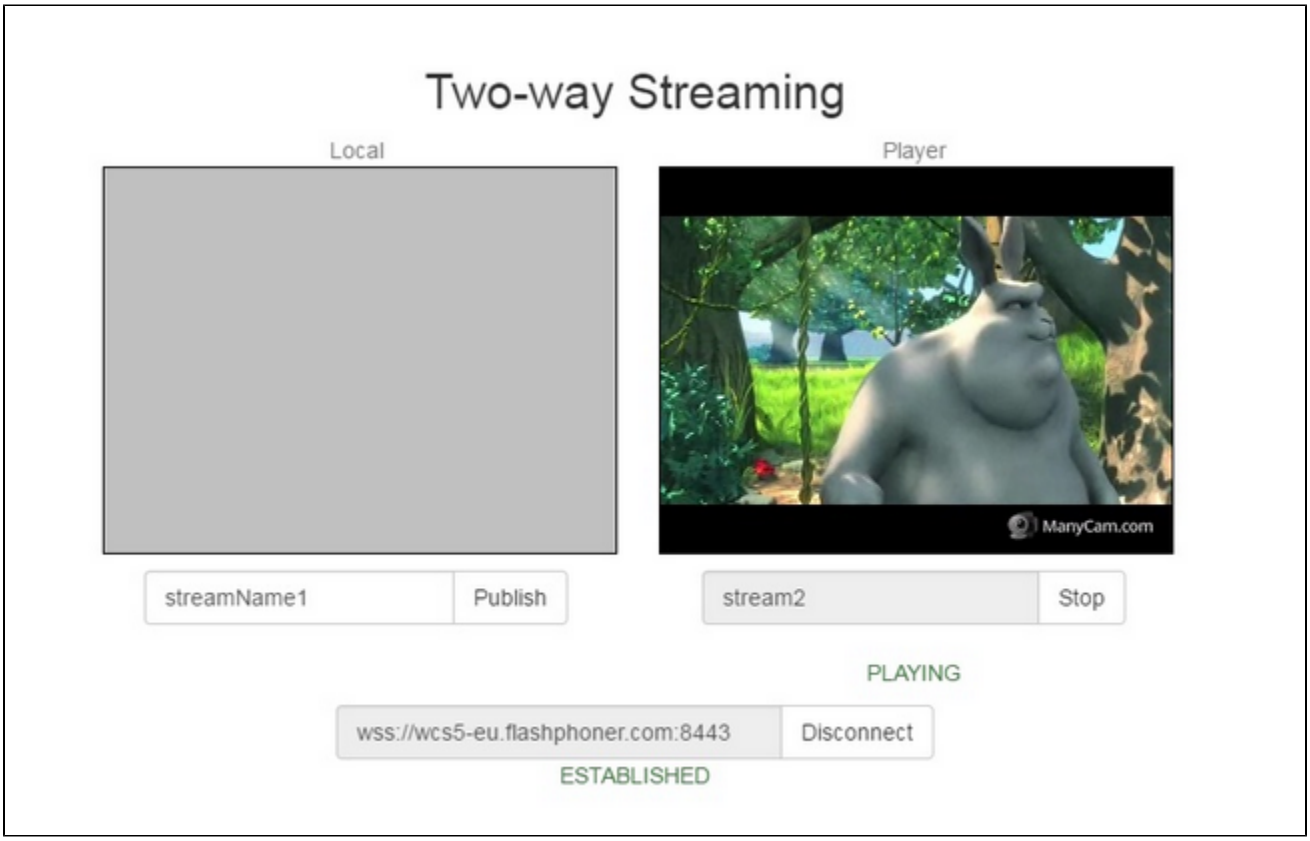
1. For the test we use:

- the demo server at wcs5-us.flashphoner.com;
- the mobile application for iOS;
- theTwo Way Streamingweb application to display the captured stream

2. Start the application on iPhone. Enter the URL of the WCS server and the name of the stream. Publish the stream by clicking "Publish":



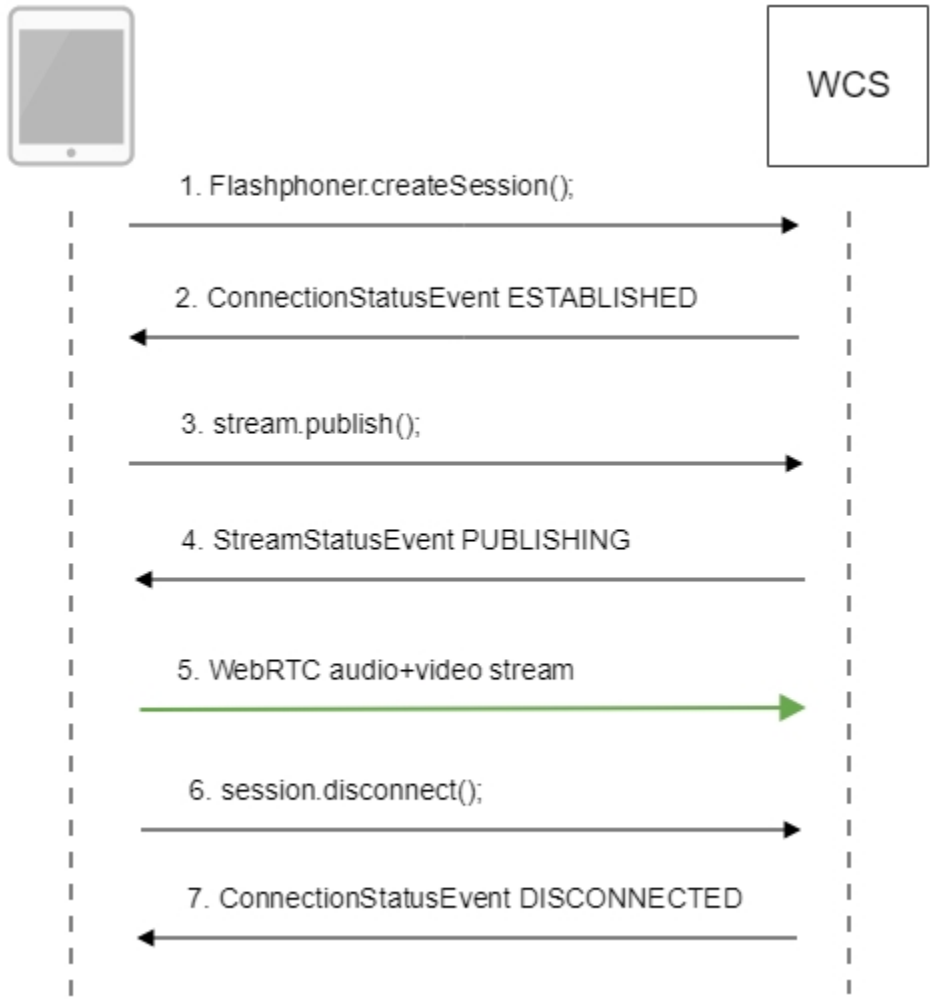
3. Open the Two Way Streaming web application. In the field just below the player window enter the name of the stream broadcast from iPhone, and click the "Play" button. The browser starts playing the stream:



Call flow

Below is the call flow when using the Streamer example

ViewController.m



1. Establishing a connection to the server.

Flashphoner.createSession();code

```
    FPWCSApi2SessionOptions *options = [[FPWCSApi2SessionOptions alloc] init];
    NSURL *url =[[NSURL alloc] initWithString:_connectUrl.text];
    options.urlServer = [NSString stringWithFormat:@"%@://%@:%@", url.scheme, url.host, url.port];
    streamName = [url.path.stringByDeletingPathExtension stringByReplacingOccurrencesOfString: @"/" withString:
@""];
    options.appKey = @"defaultApp";
    NSError *error;
    session = [FPWCSApi2 createSession:options error:&error];
```

2. Receiving from the server an event confirming successful connection.

ConnectionStatusEvent ESTABLISHEDcode

```
    [session on:kFPWCSSessionStatusEstablished callback:^(FPWCSApi2Session *rSession){
        [self changeConnectionStatus:[rSession getStatus]];
        [self onConnected:rSession];
    }];
```

3. Publishing the stream.

session.createStream();code

```
    FPWCSApi2Session *session = [FPWCSApi2 getSessions][0];
    FPWCSApi2StreamOptions *options = [[FPWCSApi2StreamOptions alloc] init];
    options.name = streamName;
    options.display = _videoView.local;
    if ( UI_USER_INTERFACE_IDIOM() == UIUserInterfaceIdiomPad ) {
        options.constraints = [[FPWCSApi2MediaConstraints alloc] initWithAudio:YES videoWidth:640 videoHeight:
480 videoFps:15];
    }
    NSError *error;
    publishStream = [session createStream:options error:&error];
```

4. Receiving from the server an event confirming successful publishing of the stream.

StreamStatusEvent, status PUBLISHINGcode

```
    [publishStream on:kFPWCSStreamStatusPublishing callback:^(FPWCSApi2Stream *rStream){
        [self changeStreamStatus:rStream];
        [self onPublishing:rStream];
    }];
```

5. Sending audio and video stream via WebRTC

6. Stopping publishing of the stream.

session.disconnect();code

```
    if ([button.titleLabel.text isEqualToString:@"STOP"]) {
        if ([FPWCSApi2 getSessions].count) {
            FPWCSApi2Session *session = [FPWCSApi2 getSessions][0];
            NSLog(@"Disconnect session with server %@", [session getServerUrl]);
            [session disconnect];
        } else {
            NSLog(@"Nothing to disconnect");
            [self onDisconnected];
        }
    } else {
        //todo check url is not empty
        [self changeViewState:_connectUrl enabled:NO];
        [self connect];
    }
```

7. Receiving from the server an event confirming successful unpublishing of the stream.

ConnectionStatusEvent DISCONNECTEDcode

```
    [session on:kFPWCSSessionStatusDisconnected callback:^(FPWCSApi2Session *rSession){
        [self changeConnectionStatus:[rSession getStatus]];
        [self onDisconnected];
    }];
```